

REMARKS

Applicant respectfully requests further examination and reconsideration in view of the arguments set forth fully below. Claims 1, 3-6, 8-15, 17-20, 22-31, 33-36, 38-46, 48-51, 53-62, 64-66, 68 and 69 were previously pending in this Application. By the above amendments, Claim 62 has been amended. Accordingly, Claims 1, 3-6, 8-15, 17-20, 22-31, 33-36, 38-46, 48-51, 53-62, 64-66, 68 and 69 are now pending in the application.

Rejections Under 35 U.S.C. §103

Within the Office Action, Claims 1, 3-6, 8-11, 14, 15, 17-20, 22-25, 27, 28 and 62 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ogawa et al. (Design and Implementation of DV based video over RTP. Proc. *Packet Video2000*, 2000) (hereinafter “Ogawa”) in view of U.S. Patent Publ. No. 2002/0141418 to Ben-Dor et al. (hereinafter “Ben-Dor”). Applicants respectfully disagree.

Ogawa teaches sending high quality, high bandwidth video and audio streams using the Internet. Ogawa also teaches using the IEEE-1394 interface for exchanging digital video streams. Ogawa teaches using the Real-time Transport Protocol (RTP) for operability. [Ogawa, Abstract] Within the Office Action, it is recognized that Ogawa does not teach generating a cycle record for each isochronous cycle of a first isochronous compliant network, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first isochronous compliant network.

Ben-Dor teaches a system including a network, bus and interface which uses software to generate packets for communication on the network. The interface and a host coordinate to transport bus device packets between the host and the bus device via tunneling over the network. [Ben-Dor, Abstract] Ben-Dor also teaches an offset added to a transmit time on the IEEE-1394 bus and inserted into a field within a common isochronous packet. [Ben-Dor, ¶110] Ben-Dor also teaches the cycle offset field is IEEE-1394 specific and represents the cycle offset of the actual transmit time from the SYT/SPH fields in the common isochronous packet. [Ben-Dor, ¶226] However, Ben-Dor does not teach generating a cycle record for each isochronous cycle of a first isochronous compliant network, wherein each cycle record includes *a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first isochronous compliant network*. Specifically, Ben-Dor merely teaches an offset; however, Ben-Dor does not teach wherein each cycle record includes a relative timing marker that

indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first isochronous compliant network.

In contrast to the teachings of Ogawa, Ben-Dor and their combination, the claimed invention is directed to a real-time transport protocol (RTP) for transporting IEEE 1394-2000 isochronous transport data. The transport data includes a stream format, such as DV (Digital Video), that has been packetized for isochronous transport by a source. The payload format is opaque to the transport mechanism. [Present Specification, Abstract] Furthermore, information associated with an isochronous packet is combined with cycle start information to generate a cycle record for an isochronous cycle. [Present Specification, page 19, lines 4-15] As described above, Ogawa, Ben-Dor and their combination do not teach generating a cycle record for each isochronous cycle of a first isochronous compliant network, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first isochronous compliant network.

The independent Claim 1 is directed to a method of communicating data streams. The method of Claim 1 comprises packetizing one or more data streams into isochronous data packets, encapsulating one or more isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet, generating a cycle record for each isochronous cycle of a first isochronous compliant network, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first isochronous compliant network and sending the real-time transport protocol data packets from a transmitting device to a receiving device over a non-isochronous compliant network, wherein the transmitting device is coupled to the first isochronous compliant network and the receiving device is coupled to a second isochronous compliant network. As described above, Ogawa, Ben-Dor and their combination do not teach generating a cycle record for each isochronous cycle of a first isochronous compliant network, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first isochronous compliant network. For at least these reasons, the independent Claim 1 is allowable over the teachings of Ogawa, Ben-Dor and their combination.

Claims 3-6, 8-11 and 14 are all dependent on the independent Claim 1. As discussed above, the independent Claim 1 is allowable. Accordingly, Claims 3-6, 8-11 and 14 are all also allowable as being dependent on an allowable base claim.

The independent Claim 15 is directed to an apparatus for communicating data streams. The apparatus of Claim 15 comprises means for packetizing one or more data streams into

isochronous data packets, means for encapsulating one or more isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet, means for generating a cycle record for each isochronous cycle of a first isochronous compliant network, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first isochronous compliant network and means for sending the real-time transport protocol data packets from a transmitting device to a receiving device over a non-isochronous compliant network, wherein the transmitting device is coupled to the first isochronous compliant network and the receiving device is coupled to a second isochronous compliant network. As described above, Ogawa, Ben-Dor and their combination do not teach means for generating a cycle record for each isochronous cycle of a first isochronous compliant network, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first isochronous compliant network. For at least these reasons, the independent Claim 15 is allowable over the teachings of Ogawa, Ben-Dor and their combination.

Claims 17-20, 22-25, 27 and 28 are all dependent on the independent Claim 15. As discussed above, the independent Claim 15 is allowable. Accordingly, Claims 16-20, 22-25, 27 and 28 are all also allowable as being dependent on an allowable base claim.

The independent Claim 62 is directed to a method of communicating data streams. The method of Claim 62 comprises packetizing one or more data streams into IEEE 1394 compliant isochronous data packets, encapsulating one or more IEEE 1394 compliant isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet, sending the real-time transport protocol data packets from a transmitting device to a receiving device over a non-isochronous compliant network and generating a cycle record for each isochronous cycle of the first IEEE 1394 compliant bus architecture, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first IEEE 1394 compliant bus architecture. As described above, Ogawa, Ben-Dor and their combination do not teach generating a cycle record for each isochronous cycle of the first IEEE 1394 compliant bus architecture, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to a cycle master of the first IEEE 1394 compliant bus architecture. For at least these reasons, the independent Claim 62 is allowable over the teachings of Ogawa, Ben-Dor and their combination.

Within the Office Action, Claim 12 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Ogawa and Ben-Dor in view of U.S. Pat. No. 6,523,696 to Saito et al. (hereinafter “Saito”). Applicants respectfully disagree.

Claims 12 is dependent on the independent Claim 1. As discussed above, the independent Claim 1 is allowable. Accordingly, Claim 12 also allowable as being dependent on an allowable base claim.

Within the Office Action, Claims 13, 29-31, 33-35, 38-50, 53-61, 64, 65, 68 and 69 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ogawa and Ben-Dor in view of U.S. Pat. No. 7,286,652 to Azriel et al. (hereinafter “Azriel”). Applicants respectfully disagree.

Within the Office Action, it is recognized that Ogawa does not teach a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet.

Ben-Dor teaches a system including a network, bus and interface which uses software to generate packets for communication on the network. The interface and a host coordinate to transport bus device packets between the host and the bus device via tunneling over the network. [Ben-Dor, Abstract] Ben-Dor also teaches an offset added to a transmit time on the IEEE-1394 bus and inserted into a field within a common isochronous packet. [Ben-Dor, ¶110] Ben-Dor also teaches the cycle offset field is IEEE-1394 specific and represents the cycle offset of the actual transmit time from the SYT/SPH fields in the common isochronous packet. [Ben-Dor, ¶226] However, Ben-Dor does not teach a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet.

Further, Azriel does not teach a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet.

Thus, Ogawa, Ben-Dor, Azriel and their combination do not teach a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet.

The independent Claim 13 is directed to a method of communicating data streams. The method of Claim 13 comprises packetizing one or more data streams into isochronous data packets and encapsulating one or more isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet sending the real-time transport data packets from a transmitting device to a receiving device over a non-isochronous

compliant network, wherein the real-time transport protocol defines a real-time transport protocol header and a real-time transport protocol data payload for each real-time transport protocol data packet, and further wherein the real-time transport protocol header includes a timestamp, the timestamp is defined by a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet. As described above, Ogawa, Ben-Dor, Azriel and their combination do not teach a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet. For at least these reasons, the independent Claim 13 is allowable over the teachings of Ogawa, Ben-Dor, Azriel and their combination.

The independent Claim 29 is directed to an apparatus to communicate data streams. The apparatus of Claim 29 comprises a transmitting circuit configured to encapsulate one or more first isochronous data packets according to a real-time transport protocol, thereby forming a first real-time transport protocol data packet, and to transmit the first real-time transport protocol data packets over a non-isochronous compliant network, wherein the real-time transport protocol defines a real-time transport protocol header and a real-time transport protocol data payload for each real-time transport protocol data packet, the real-time transport protocol header includes a timestamp, and the timestamp is defined by a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet and a receiving circuit configured to receive a second real-time transport protocol data packet from the non-isochronous compliant network, and to de-encapsulate the received second real-time transport protocol data packets into one or more second isochronous data packets. As described above, Ogawa, Ben-Dor, Azriel and their combination do not teach a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet. For at least these reasons, the independent Claim 29 is allowable over the teachings of Ogawa, Ben-Dor, Azriel and their combination.

Claims 30, 31, 33-35 and 38-42 are all dependent on the independent Claim 29. As discussed above, the independent Claim 29 is allowable. Accordingly, Claims 30, 31, 33-35 and 38-42 are all also allowable as being dependent on an allowable base claim.

The independent Claim 43 is directed to a network of devices to communicate data streams. The network of devices of Claim 43 comprises a transmitting device configured to encapsulate one or more isochronous data packets according to a real-time transport protocol, thereby forming a real-time transport protocol data packet, and to transmit the real-time transport

protocol data packets, wherein the real-time transport protocol defines a real-time transport protocol header and a real-time transport protocol data payload for each real-time transport protocol data packet, the real-time transport protocol header includes a timestamp, and the timestamp is defined by a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet, a first isochronous compliant network coupled to the transmitting device, a receiving device configured to receive the real-time transport protocol data packets, a second isochronous compliant network coupled to the receiving device and a non-isochronous compliant network coupled to the first isochronous compliant network and the second isochronous compliant network to transmit the real-time transport protocol data packets from the transmitting device to the receiving device. As described above, Ogawa, Ben-Dor, Azriel and their combination do not teach a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet. For at least these reasons, the independent Claim 43 is allowable over the teachings of Ogawa, Ben-Dor, Azriel and their combination.

Claims 44-46, 48-50 and 53-57 are all dependent on the independent Claim 43. As discussed above, the independent Claim 43 is allowable. Accordingly, Claims 44-46, 48-50 and 53-57 are all also allowable as being dependent on an allowable base claim.

The independent Claim 58 is directed to a method of communicating data streams. The method of Claim 58 comprises packetizing one or more data streams into IEEE 1394 compliant isochronous data packets, encapsulating one or more IEEE 1394 compliant isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet, wherein the real-time transport protocol defines a real-time transport protocol header and a real-time transport protocol data payload for each real-time transport protocol data packet, the real-time transport protocol header includes a timestamp, and the timestamp is defined by a value of the isochronous cycle start transaction corresponding to the receipt of a first 1394 compliant isochronous data packet included in a particular real-time transport protocol data packet and sending the real-time transport protocol data packets from a transmitting device to a receiving device over a non-isochronous compliant network. As described above, Ogawa, Ben-Dor, Azriel and their combination do not teach a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a particular real-time transport protocol data packet. For at least these reasons, the independent Claim 58 is allowable over the teachings of Ogawa, Ben-Dor, Azriel and their combination.

Claims 59-61, 64, 65, 68 and 69 are all dependent on the independent Claim 58. As discussed above, the independent Claim 58 is allowable. Accordingly, Claims 59-61, 64, 65, 68 and 69 are all also allowable as being dependent on an allowable base claim.

Within the Office Action, Claims 26, 36, 51 and 66 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ogawa and Ben-Dor in view of Saito and Azriel. Applicants respectfully disagree.

Claim 26 is dependent on the independent Claim 15. Claim 36 is dependent on the independent Claim 29. Claim 51 is dependent on the independent Claim 43. Claim 66 is dependent on the independent Claim 58. As discussed above, the independent Claims 15, 29, 43 and 58 are all allowable. Accordingly, Claims 26, 36, 51, and 66 are all also allowable as being dependent on an allowable base claim.

For at least the foregoing reasons, Applicant respectfully submits that the claims are in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
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